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University of Montana zoology professor receives grant

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RECEIVES GRANT

By Connie Revell

MISSOULA--

Dr. Arden R. Gaufin, University of Montana professor of zoology and assistant director of the Biological Station at Yellow Bay on Flathead Lake, recently received a three-year grant of $72,000 from the Federal Water Pollution Control Administration of the U.S. Department of the Interior.

The stone fly, well known to the region's trout fishermen as the "salmon fly," is one of several aquatic insects to be studied through the grant. Research is aimed at the preservation of trout and other fresh-water fish.

"To support fish, the water in lakes and streams must support aquatic insects such as salmon flies, which trout feed on," Dr. Gaufin explained. "Aquatic insects are threatened by changes in the quality of the water. Unfavorable conditions, even for a few hours, can eliminate a population or species."

Dr. Gaufin's study will concentrate on three factors which affect water quality--temperature, dissolved oxygen and acidity. Other factors which control the lives of these insects include carbon dioxide, oil, turbidity, floating materials, radioactive materials and toxic substances such as insecticides.

For the next three years, Dr. Gaufin and his assistants will be gathering stone flies, caddis files and may flies from the area surrounding the Biological Station. The flies will then be placed in large white tubs which simulate lakes and streams.

By varying the temperature, acidity and other conditions of the water, Dr. Gaufin will be able to determine the insects' ability to tolerate change.

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Eventually Dr. Gaufin hopes to field test some of his work in the stream which flows through the area.

Dr. Gaufin's study reflects the urgent need for knowledge in setting water quality standards. During 1967 Dr. Gaufin was a member of the Committee on Water Quality Criteria appointed by the Secretary of the Interior. The report of this committee emphasizes that the "unknowns outweigh the knowns" in setting the criteria for water quality standards.

Dr. Gaufin's research on the environmental requirements of aquatic insects is part of a nationwide effort to eliminate the unknowns in pollution control. His work directly applies to the lakes and streams of the intermountain region and to similar species under similar conditions all over the country.

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